REVIEW QUESTIONS 3

MULTIPLE CHOICE

1. The if statement is an example of a _____.

(a) sequence structure
(b) decision structure
(c) pathway structure
(d) class structure

2. This type of expression has a value of either true or false.

(a) binary expression
(b) decision expression
(c) unconditional expression
(d) boolean expression

3. >, <, and == are _____.

(a) relational operators
(b) logical operators
(c) conditional operators
(d) ternary operators

4. &&, ||, and ! are _____.

(a) relational operators
(b) logical operators
(c) conditional operators
(d) ternary operators

5. This is an empty statement that does nothing.

(a) missing statement
(b) virtual statement
(c) null statement
(d) conditional statement

6. To create a block of statements, you enclose the statements in these.

(a) Parentheses ( )
(b) square brackets [ ]
(c) angled brackets < >
(d) braces { }

7. This is a boolean variable that signals when some condition exists in the program.

(a) flag
(b) signal
(c) sentinel
(d) siren

8. How does the character ‘A’ compare to the character ‘B’?

(a) ‘A’ is greater than ‘B’
(b) ‘A’ is less than ‘B’
(c) ‘A’ is equal to ‘B’
(d) You cannot compare characters

9. This is an if statement that appears inside another if statement.

(a) nested if statement
(b) tiered if statement
(c) dislodged if statement
(d) structured if statement

10. An else clause always goes with _____.

(a) the closest previous if clause that doesn’t already have its own else clause
(b) the closest if clause
(c) the if clause that is randomly selected by the compiler
(d) none of these

11. When determining whether a number is inside a range, it’s best to use this operator.

(a) &&
(b) !
(c) ||
(d) ? :

12. This determines whether two different String objects contain the same string.

(a) the == operator
(b) the = operator
(c) the equals method
(d) the stringCompare method

13. The conditional operator takes this many operands.

(a) one
(b) two
(c) three
(d) four

14. This section of a switch statement is branched to if none of the case expressions match the switch expression.

(a) else
(b) default
(c) case
(d) otherwise

15. You can use this method to display formatted output in a console window.

(a) Format.out.println
(b) Console.format
(c) System.out.printf
(d) System.out.formatted

16. **True or False:** The = operator and the == operator perform the same operation.

17. **True or False:** A conditionally executed statement should be indented one level from the if clause.

18. **True or False:** All lines in a conditionally executed block should be indented one level.

19. **True or False:** When an if statement is nested in the if clause of another statement, the only time the inner if statement is executed is when the boolean expression of the outer if statement is true.

20. **True or False:** When an if statement is nested in the else clause of another statement, the only time the inner if statement is executed is when the boolean expression of the outer if statement is true.

21. **True or False:** The scope of a variable is limited to the block in which it is defined.

FIND THE ERROR

1.

Find the errors in the following code:

```
// Warning! This code contains ERRORS!
if (x == 1);
  y = 2;
else if (x == 2);
  y = 3;
else if (x == 3);
  y = 4;
```

2.

Find the errors in the following code:

```
// Warning! This code contains an ERROR!
if (average = 100)
  System.out.println("Perfect Average!");
```

3.

Find the errors in the following code:

```
// Warning! This code contains ERRORS!
if (num2 == 0)
  System.out.println("Division by zero is not possible.");
  System.out.println("Please run the program again ");
  System.out.println("and enter a number besides zero.");
else
  Quotient = num1 / num2;
  System.out.print("The quotient of " + Num1);
  System.out.print(" divided by " + Num2 + " is ");
  System.out.println(Quotient);
```

4.

Find the errors in the following code:

```
// Warning! This code contains ERRORS!
switch (score)
{
  case (score > 90):
    grade = 'A';
    break;
  case(score > 80):
    grade = 'b';
    break;
  case(score > 70):
    grade = 'C';
    break;
  case (score > 60):
    grade = 'D';
    break;
  default:
    grade = 'F';
}
```

5. The following statement should determine whether x is not greater than 20. What is wrong with it?

```
if (!x > 20)
```

6. The following statement should determine whether count is within the range of 0 through 100. What is wrong with it?

```
if (count >= 0 || count <= 100)
```

7. The following statement should determine whether count is outside the range of 0 through 100. What is wrong with it?

```
if (count < 0 && count > 100)
```

8. The following statement should assign 0 to z if a is less than 10; otherwise, it should assign 7 to z. What is wrong with it?

```
z = (a < 10) : 0 ? 7;
```

9. Assume that partNumber references a String object. The following if statement should perform a case-insensitive comparison. What is wrong with it?

```
if (partNumber.equals("BQ789W4"))
  available = true;
```

10. What is wrong with the following code?

```
double value = 12345.678;
System.out.printf("%.2d", value);
```

ALGORITHM WORKBENCH

1. Convert the following if-else-if statement into a switch statement:

```
if (choice == 1)
{
  System.out.println("You selected 1.");
}
else if (choice == 2 || choice == 3)
{
  System.out.println("You selected 2 or 3.");
}
else if (choice == 4)
{
  System.out.println("You selected 4.");
}
else
{
  System.out.println("Select again please.");
}
```

2. Write an if-else statement that displays the String objects title1 and title2 in alphabetical order.